

WHAT IS CLAIMED IS:

1. An apparatus for feeding articles to a transferring line, this transferring line feeding a container filling machine, the apparatus including:

means for conveying a plurality of articles to an inlet section of said apparatus;

a plurality of working means, set, with an initial configuration with predetermined mutual distances, at said inlet section for receiving said articles from said conveying means, and operated after receiving said articles, to move vertically from said inlet section to an outlet section of said apparatus, where said articles are released, and then to move back to said inlet section;

a plurality of collecting magazines, situated at said outlet section for receiving said articles and for supporting said articles to define corresponding piles of articles;

guide means, cooperating with said plurality of working means for changing said predetermined mutual distances between said plurality of working means during the transition from said inlet section to said outlet section, in which the distances between said plurality of working means are set to match distances between said collecting magazines, and for re-setting said plurality of working means to said initial configuration during a transition back to said inlet section;

pushing means, situated at said outlet section and operated when said piles, situated inside each of said collecting magazines, are completed to convey said piles of articles to boxes made in a transferring line.

2. An apparatus according to claim 1, wherein said working means include at least one transversal plate, operated when

they have received the articles from said conveying means, to reciprocate between said inlet section and said outlet section, said transversal plate supporting slidably a plurality of longitudinal plates for receiving said articles.

3. An apparatus according to claim 2, wherein said working means include gripping means, connected to each longitudinal plate, and operated during the movement of said transversal plate to stabilize the articles carried by said longitudinal plates.

4. An apparatus according to claim 2, wherein said guide means, cooperating with said working means, include a plurality of linear cam grooves, each of which interacts with the a corresponding longitudinal plate.

5. An apparatus according to claim 1, wherein the distance between said collecting magazines is changeable and its value is substantially equal to the corresponding distance between said boxes made in said transferring line.

6. An apparatus according to claim 1, wherein each of said collecting magazines includes lateral walls, having, in their lower part, corresponding horizontal folded edges, which lateral walls swing outwardly in step relation with the movement of said longitudinal plates, so as to increase the inlet opening of a corresponding open bottom of said collecting magazines, and to allow the articles carried by said longitudinal plates, to be introduced into said magazine from the bottom, thus defining said piles of articles in said collecting magazine, said horizontal folded edges supporting

said piles of articles when said lateral walls are parallel to each other.

7. An apparatus according to claim 1, wherein each of said collecting magazines includes stationary lateral walls and elastic means, situated at an open bottom of said collecting magazines for yieldingly allowing passage of said articles, carried by said longitudinal plates, so as to define said piles of articles inside said collecting magazine, said elastic means supporting said piles between said lateral walls.

8. An apparatus according to claim 1, wherein said conveying means include at least one belt conveyor, which moves a plurality of articles to said inlet section, to feed said longitudinal plates at said inlet section.

9. An apparatus according to claim 8, wherein said belt conveyor is an endless belt conveyor and is mounted on relative driving and driven wheels.

10. An apparatus according to claim 1, wherein said conveying means include a plurality of conveying belts, arranged side by side, each of which aimed at feeding articles to a corresponding longitudinal plate at said inlet section.

11. An apparatus according to claim 10, wherein said belt conveyor is an endless belt conveyor and is mounted on relative driving and driven wheels.

12. An apparatus according to claim 1, wherein said inlet section is situated at a lower level with respect to said outlet section.

13. An apparatus according to claim 1, wherein said transferring line is arranged angularly with respect to said conveying means.

14. An apparatus according to claim 13, wherein said transferring line is arranged longitudinally or crosswise with respect to said conveying means.

15. An apparatus according to claim 1, wherein said articles are tablets, pills, capsules, or strip packages.